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AUTHOR Yarbro, Richard
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ABSTRACT

Using criteria proposed by the American Library Association (ALA) and the Association for Educational Communications and Technology (AECT), responses to 360 questionnaires were analyzed to assess the components of audiovisual programs in the secondary public schools of Tennessee. Questions included: (1) What personnel are responsible for the operation of the audiovisual program in the individual school? (2) What aides are utilized in the audiovisual program of each school? (3) What equipment is present in each school? (4) What are the opinions of the person responsible for the operation of the audiovisual program concerning strengths and weaknesses of the program in each school? (5) What are the plans for future development of the audiovisual program in each school? Results indicated that schools are weak in qualified personnel, that students could be used to further assist in various operations of the audiovisual program, and that lack of money for operation and development of the audiovisual program is the major inhibiting factor. Faculty interest, materials, and equipment were perceived by the audiovisual coordinator as strengths. Overall findings indicate that schools are not meeting the standards recommended by the ALA and the AECT. (MER)

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AN INVESTIGATION OF THE AUDIOVISUAL PROGRAMS IN THE SECONDARY PUBLIC SCHOOLS OF TENNESSEE

Richard Yarbro

Professor of Education

Austin Peay State University

Clarksville, Tennessee

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The advancement of technology has produced new audiovisual equipment and instructional materials which are changing the traditional classroom environment. The textbook, which has traditionally been the primary instructional medium, is being supplemented by printed, recorded, and projected forms of instructional materials. The equipment which enables these new instructional materials to be utilized is receiving more attention. It has been difficult for educators to disregard the role that media is now playing.

The revolution in communication is having drastic effects on the entire society. Through mass media, events from all parts of the world are instantly communicated. Children who are being reared under the influence of mass media are constantly exposed to varied means of communication. The symbols, signals, and noises that communicate and influence them are a common occurrence.

Educators are beginning to realize that teaching techniques and methods must be compatible with the experiences which children have outside the school environment. Children cannot be expected to respond enthusiastically to the same method of instruction day after day, when life outside the school is filled with varied forms of communication. With the increased amount of information that children are required to absorb, the schools must furnish the best communication possible and strive for better understanding.

This study indicates the present status of the audiovisual programs in Tennessee secondary public schools, and areas in which these programs need improvement.

The purpose of this study was to investigate the components of the audiovisual programs in the secondary public schools of Tennessee and to compare these components to the national audiovisual standards. Specifically, this

investigation sought to answer the following questions: 1) What personnel are responsible for the operation of the audiovisual program in the individual school?; 2) What aides are utilized in the audiovisual program of each school?; 3) What equipment is present in each school?; 4) What are the opinions of the person responsible for the operation of the audiovisual program concerning strengths and weaknesses of the program in each school?; 5) What are the plans for future development of the audiovisual program in each school?

Procedures

All the secondary public schools (grades seven through twelve or any combination thereof) were identified and mailed questionnaires. During the spring of 1980, five hundred and sixteen questionnaires were mailed and 360 were returned for a response rate of 70 percent. The data from the various schools were divided into five groups by school enrollment. There were 16 schools in the less than 250 enrollment category, 81 in the 250 to 499 enrollment category, 111 in the 500 to 749 enrollment category, 68 in the 750 to 999 enrollment category and 84 in the above 999 enrollment category.

Evaluative judgments concerning personnel and equipment in the various categorized schools were based on the national audiovisual standards developed by the American Library Association and the Association for Educational Communication and Technology and published in 1975 in the booklet entitled "Media Programs District and School".

Personnel

Tables 1 and 2 indicate a strong majority of the schools in all categories have an individual designated as the Audiovisual Building Coordinator and this

person is usually the librarian.

TABLE 1

Designation of an Individual as Audiovisual Building Coordinator

Enrollment	Number of Schools	Yes	Percent	No	Percent
Less 250	16	15	94	1	1
250--499	62	45	73	17	27
500--749	109	98	90	11	10
750--999	66	59	89	7	11
above 999	78	72	92	6	8
Total	331	289	87	42	13

TABLE 2

Other Functions of the Audiovisual Building Coordinator

Enrollment	None	Classroom Teacher	Librarian	Principal	Other
Less 250	0	7	9	1	0
250--499	0	4	47	1	2
500--749	0	9	94	0	5
750--999	2	6	55	1	3
above 999	5	3	67	0	2
Total	7	29	272	3	12

Table 3 shows that although schools have a designated audiovisual building coordinator, this person usually spends one-fourth or less of their time in work directly connected with this program.

TABLE 3

Amount of Total Work Time the Audiovisual Building Coordinator Devotes to Operating the Audiovisual Program

Enrollment	Less than 1/4	1/4	1/3	1/2	2/3	3/4	Full Time
Less 250	10	2	0	3	0	0	0
250—499	24	13	5	4	0	0	2
500—749	37	24	17	8	0	0	11
750—999	27	15	7	7	0	1	4
above 999	21	17	13	11	3	4	9
Total	119	71	42	33	3	5	26

Tables 4 and 5 reveal the coordinator usually has from one to six hours earned in audiovisual courses and has experience in this capacity. Many individuals show experience of five years or more with a majority having a Master's degree as shown in Tables 5 and 6.

TABLE 4

Amount of College Hours Earned in Audiovisual Education by the Audiovisual Building Coordinator

Enrollment	Hours Earned				
	None	1 to 3	4 to 6	7 to 9	above 9
Less 250	2	5	6	0	2
250—499	5	17	19	2	7
500--749	10	27	29	17	21
750—999	5	20	13	11	13
above 999	7	17	23	13	17
Total	29	86	90	43	60

TABLE 5

Experience of the Audiovisual Building Coordinator in Operating the Audiovisual Program

Enrollment	Experience					
	First year	One year	Two years	Three years	Four years	5 years or more
Less 250	1	0	3	2	1	7
250--499	7	1	4	3	3	34
500—749	7	4	10	10	6	68
750—999	5	2	3	3	5	46
above 999	9	1	9	10	4	44
Total	29	8	29	28	19	199

TABLE 6

Degrees Held By the Audiovisual Building Coordinators

Enrollment	Degrees Held			
	Less than	Bachelor's	Master's	Doctor's
Less 250	0	5	10	0
250--499	1	19	33	1
500—749	1	37	61	1
750—999	1	23	37	0
above 999	3	13	61	0
Total	6	97	202	2

The standards recommend one full-time media professional for every 250 students or major fraction thereof. Although most schools in all enrollment categories have someone functioning as the audiovisual coordinator, they fall

far short of having a full-time media professional for every 250 students enrolled. A majority of the respondents indicate they have from one to six hours in media courses. Although it is encouraging that some hours have been secured in media courses, it falls short of the recommended media specialist certification.

A profile of a typical audiovisual Building Coordinator would be a librarian with five or more years experience and a Master's degree. The individual would have earned approximately five hours in media courses and would devote about one-fourth of their total working time as the coordinator.

Few schools have an audiovisual technician as indicated in Table 7. Less than one-half of the technicians have a Bachelor's degree and most spend less than one-fourth of their time functioning in the audiovisual program as shown in Tables 8 and 9.

TABLE 7

Audiovisual Technicians in the Schools

Enrollment	Technicians Employed			
	None	One	Two	Above two
Less 250	7	0	0	0
250--499	58	2	0	0
500--749	99	6	3	2
750--999	58	4	2	0
above 999	62	9	1	1
Total	284	21	6	3

TABLE 8

Amount of Total Work Time the Audiovisual Technician Devotes to the Audiovisual Program

Enrollment	Less than 1/4	1/4	1/3	1/2	2/3	3/4	Full Time
Less 250	12	0	0	0	0	0	0
250—499	3	1	1	0	0	0	0
500—749	6	0	1	1	0	1	1
750—999	4	0	0	1	0	1	2
above 999	4	4	0	0	0	0	3
Total	29	5	2	2	0	2	6

TABLE 9

College Educational Background of the Audiovisual Technician

Enrollment	College Education				
	None	Less than Bachelor's	Bachelor's	Master's	Above Master's
Less 250	0	0	0	0	0
250—499	3	2	0	0	0
500—749	1	3	1	3	1
750—999	5	0	1	1	0
above 999	2	2	1	6	0
To	11	7	3	10	1

Table 10 and 11 show most schools do not have media aides although some have one. As the enrollment in the schools increases it becomes more likely a media aide will be present and this individual will spend more of their total working time in the audiovisual program.

TABLE 10

Media Aides in the Schools

Enrollment	None	One	Two	Three or more
Less 250	12	0	0	0
250—499	48	9	0	0
500—749	80	20	0	5
750—999	36	20	1	1
above 999	28	36	6	1
Total	204	85	7	7

TABLE 11

Amount of Total Work Time the Media Aide Devotes to the Audiovisual Program

Enrollment	1/4	1/3	1/2	2/3	3/4	Full Time
Less 250	0	0	0	0	0	0
250—499	8	0	1	0	0	0
500—749	3	3	4	1	0	9
750—999	7	2	3	0	2	5
above 999	8	3	3	1	2	3
Total	26	8	11	2	4	17

The standards recommend two full-time support staff, either media technicians or media aides, for every 250 students or fraction thereof. Most schools would not meet this standard since a majority do not have any technicians or aides.

Tables 12 and 13 indicate most schools do not involve students in the audiovisual program. Although the standards do not recommend student assistants,

many schools have found them to be a valuable asset to the audiovisual program.

TABLE 12

Enrolled Students Who Assist in the Audiovisual Program

Enrollment	Number of Students											
	None	1	2	3	4	5	6	7	8	9	10	10 or more
Less 250	13	1	0	0	2	0	0	0	0	0	0	0
250--499	32	5	7	2	0	0	2	0	1	0	2	4
500--749	48	9	8	11	2	3	4	1	4	0	3	11
570--999	38	1	4	4	2	5	1	3	1	2	3	1
above 999	33	5	6	1	4	6	4	1	0	0	1	4
Total	164	21	25	18	10	14	11	5	6	2	9	20

TABLE 13

Students Used as Projectionists

Enrollment	Yes	No
Less 250	3	9
250--499	6	8
500--749	31	67
750--999	18	39
above 999	27	41
Total	85	164

Equipment

Specific pieces of equipment were selected to be utilized in this study as presented in Tables 14 and 15. There are some pieces of equipment listed

that will not be compared to the standards but are presented for the reader's information. These abbreviated standards list the following needs with minimum recommendations based on schools with 50 or fewer users.

A. 16mm and 8mm projection and video tape units--minimum 6 units with 2 assigned to the media center.

B. Filmstrip equipment: silent and sound projectors and viewers--minimum 10 projectors and 30 viewers with one projector for each three users.

C. Slide projectors---minimum 6 or one for every 100 users.

D. Slide viewers--minimum 10 or one for every 50 users.

E. Overhead projectors--minimum 10 or one for every 50 users.

F. Opaque projectors--minimum one per media center and one per 500 users.

G. Audio equipment: tape recorders and record players--minimum 30 audio reproduction units.

The following information will refer to the data presented in Table 14. The comparisons of reported equipment will be made with the minimum standards recommended for schools of 500 or less and schools having enrollments from 500 to 749 with generalizations projected for other sized schools.

The combined averages of 8mm, 16mm and video-taping units approaches the standard as stated. The standard calls for 8 units per school while 6.63 is obtained by combining the averages. The above 999 category has a combined average of 12.54 that would seem to fall well below the standards recommendations. Other enrollment categories also appear to fall short of the standards projected for their enrollment.

The combined averages of filmstrip projectors and sound filmstrip projectors indicated 9.71 compared to the 10 listed in the standards. This indicated the schools

in the 500 to 749 enrollment category are very close to meeting this standard. The requirement for 30 filmstrip viewers is not being met by this category with only an average of 4.98 being reported. The above 999 category reports 18.50 combined averages of sound and silent filmstrip projectors and would fall slightly below a projected standard of 20 for that category. The 250 to 499 enrollment category appears to exceed the projected standard of 5 for these items by reporting an 8.50 combined average. The other enrollment categories appear to approach but fall slightly below a projected standard. All enrollment categories appear to fall well short of the projected standards for filmstrip viewers.

The number of slide viewers falls far short of the standard for schools of 500 enrollment. The data reveals an average of 1.89 slide viewers exist in each school while the standards present 6 as a needed quantity. Projected standards for all other enrollment categories indicate the quantity available is well short of the recommendations.

Very few slide viewers appear to be present in any enrollment category. The 500--749 enrollment category indicated an average of only .95 viewers available. This is far below the standard of 10 recommended and would be the same for other enrollment categories.

The 9.28 average of overhead projectors in the 500 to 749 enrollment category is very close to the standard of 10. Other enrollment categories also fall close to projected standards.

The 1.91 average of opaque projectors in the 500 to 749 enrollment category is close to the standard of 2. Other enrollment categories also fall close to projected standards.

The 15.64 combined average of tape recorders and record players falls short of the 30 audio reproduction units recommended. Other enrollment categories,

TABLE 14

Averages of Various Pieces of Audiovisual Equipment Present in the Schools

Enrollment	8mm projector	16mm projector	Filmstrip projector	Slide projector	Sound filmstrip projector	Overhead projector	Opaque projector	Filmstrip viewer	Slide viewer	T.V. receivers	Record players	Audio tape players	Copying machines	Video-tape systems	Projection carts	Duplicating machines	Portable screens
Less 250	.15	3.00	3.08	.80	.91	4.36	1.12	4.69	.13	3.79	9.31	6.73	.93	.13	2.93	2.47	.94
250--499	.76	3.93	6.83	1.61	1.67	7.52	1.81	3.46	.41	2.35	8.34	4.96	1.28	.45	6.88	1.78	3.02
500--749	.84	5.11	7.85	1.89	1.86	9.28	1.91	4.98	.95	2.57	9.66	5.98	1.45	.68	7.81	1.82	3.04
750--999	1.09	6.74	9.98	2.08	2.73	11.69	1.85	4.82	.53	2.79	11.07	7.72	2.72	.56	10.74	2.61	2.82
above 999	1.32	9.54	13.98	3.64	4.52	16.42	2.37	6.30	1.23	6.27	13.31	10.78	3.03	1.68	13.19	2.89	4.47
Average	.83	5.66	8.34	2.00	2.34	9.85	1.81	4.85	.65	3.55	10.34	7.23	1.88	.70	8.31	2.31	2.86

with the exception of the less than 250 enrollment category, fall short of projected standards. The less than 250 enrollment category with a combined average of 16.04 shows strong quantity in audio reproduction units.

Table 15 indicates the percent of schools that have at least one piece of the listed equipment for local production of instructional materials. Inspection of the table indicates in some instances the likelihood of a school having at least one piece of this equipment increases as enrollment increases, although it does not appear to be a uniform trend. It appears that about one-half of all the schools have equipment for dry mounting, laminating and transparency production. Most other local production equipment falls below the 50% level in the various enrollment categories with the exception of the spirit duplicator which appears to be available in most schools.

TABLE 15

Percent of Schools Having at Least One of Various Pieces of Equipment for Local Production

Enrollment	Dry mount press	Tacking iron	Paper cutters	Transparency production	16mm camera	8mm camera	Rapid process camera	Darkroom equipment	Spirit duplicator	Primary typewriter	Copy camera	Light box	35mm camera	Mechanical lettering	Electrostatic stencil
Less 250	47	40	88	43	7	7	0	0	100	60	14	7	20	21	7
250--499	22	24	79	56	9	7	3	20	73	48	13	10	10	8	23
500--749	40	38	87	52	13	13	12	31	77	39	12	12	22	16	13
750--999	55	51	77	51	17	10	5	24	78	63	24	5	37	19	13
above 999	56	49	88	70	16	21	17	42	81	46	34	14	38	40	26

Strengths and Weaknesses in the Audiovisual Program

Table 16 indicates the major strengths and weaknesses of the audiovisual program as perceived by the Audiovisual Building Coordinator. In most enrollment categories; faculty interest, materials, and equipment; are listed most frequently as strengths. The perceived weaknesses are also shown with lack of money being the most frequently mentioned weakness. Lack of equipment, staff, time, space, equipment repair, and faculty interest; listed in rank order, are other perceived weaknesses.

It seems the Audiovisual Coordinators perceived more weaknesses than strengths as shown through the difference in frequency responses between strengths and weaknesses.

TABLE 16

Frequency of Response to Strengths and Weaknesses of the Audiovisual Program

	Strengths						Weaknesses							
	Faculty interest	Materials	Equipment	Staff	Centralized Media	Maintenance	Money	Staff	Time	Equipment Repair	Equipment	Space	Faculty lack of interest	Training in A.V.
Less 250	1	5	4	0	0		6	2	3	3	1	0	2	0
250--499	23	10	11	2	9		58	4	12	4	20	14	11	5
500--749	17	18	15	5	2	4	68	16	13	12	24	12	11	7
750--999	18	15	8	4	6		41	25	11	12	12	11	5	3
above 999	27	22	21	9	6	2	48	20	14	15	32	15	11	3
Totals	86	70	59	20	23	6	221	67	53	46	89	52	40	18

Future Plans

Table 17 shows the most frequently mentioned item in all enrollment categories for future development of the audiovisual program was the addition of equipment. Future plans for the addition of staff, space, and services seemed to be scant.

TABLE 17

Future Additions to the Audiovisual Program

	Staff	Equipment	Space	Services
Less 250	0	4	3	2
250--499	2	33	8	4
500—749	2	57	8	7
750—999	4	20	6	5
above 999	8	53	5	14
Total	16	167	30	32

Conclusions

The secondary public schools in Tennessee are not meeting the standards as recommended by The American Library Association and The Association for Educational Communications and Technology. This extensive study revealed that most areas under investigation fell short of the recommendations. The schools are weak in qualified personnel devoting their full energies to the audiovisual program. This seems to be an area that could be significantly improved by allowing individuals already associated with the program to devote more of their work time to the audiovisual program. An untapped potential that seems to exist in many schools is the limited use of students in assisting

in various operations of the audiovisual program.

Although the quantity of audiovisual equipment in the majority of the secondary schools did not meet the standards, there seemed to be closer alignment with the standards in this phase of the program than in other components under investigation.

The availability of money for operation and development of the audiovisual program seems to be a major inhibiting factor. Faculty interest, materials and equipment are perceived by the audiovisual coordinator as being strengths.

Overall future plans for the development of the audiovisual program seem to be scant. There seem to be plans in most schools for the addition of equipment.

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